

Application Serial No. 10/003,463  
Amendment Dated 12 October 2005  
Reply to Office Action of 12 April 2005

*AMENDMENTS TO THE CLAIMS*

This listing of claims will replace all prior versions, and listings, of claims in the application.

*Listing of Claims*

Claim 1 (currently amended): A pharmaceutical composition that potentiates immunogenicity of low immunogenic antigens, containing comprising:

- (A) one or more low immunogenic antigens; and
- (B) one a vaccine carrier consisting in of very small size proteoliposomes (VSSPs), wherein the VSSPs are derived from the Outer Membrane Protein Complex (OMPC) of a Gram-negative bacteria strain (*Neisseria meningitidis*), which has wherein gangliosides have been incorporated into the OMPC therein; and
- (C) eventually one or more adjuvants.

Claim 2 (currently amended): The A composition of claim 1, wherein the low immunogenic antigens may be selected from peptides, polypeptides, proteins, or their corresponding nucleic acid sequences, or target cells with vaccine interest, or lysates thereof, or combinations thereof.

Claim 3 (currently amended): The A composition of claim 2, wherein the low immunogenic antigens or their extra-cellular domains are growth factor receptors.

Claim 4 (currently amended): The A composition of claim 3, wherein the extra-cellular domains of the growth factors receptors may or may not contain the trans-membrane region.

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Claim 5 (currently amended): The A composition of claims 3, wherein the growth factor receptors are HER-1, HER-2, PDGR-R or any variation containing the extra-cellular domain, with or without the trans-membrane region.

Claim 6 (currently amended): The A composition of claim 1, wherein the ~~vaccine carrier proteoliposomes are obtained from the Outer Membrane Protein Complex from *Neisseria meningitidis*~~ is either a wild type or a genetically modified strain of *Neisseria meningitidis*.

Claim 7 (currently amended): The A composition of claim 1, wherein the ~~vaccine carrier proteoliposomes with gangliosides incorporated therein the VSSPs~~ are obtained by hydrophobically incorporating said the gangliosides into the OMPC Outer Membrane Protein Complex of *Neisseria meningitidis*.

Claim 8 (currently amended): The A composition of claim 7, wherein the gangliosides being hydrophobically incorporated into the Outer Membrane Protein Complex of *Neisseria meningitidis* are GM1, GM3 or their N-glycolylated variations.

Claim 9 (currently amended): The A composition of claim 1, wherein the adjuvant is an oily adjuvant, or a natural or recombinant polypeptide.

Claim 10 (currently amended): The A composition of claim 9, wherein the oily adjuvant is the Incomplete Freund's Adjuvant.

Claim 11 (currently amended): The A composition of claim 10, wherein the Incomplete Freund's Adjuvant is Montanide ISA 51.

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Claim 12 (currently amended): The A composition of claim 9, wherein the polypeptide adjuvant is a cytosine or a chymosin cytokine.

Claim 13 (currently amended): The A composition of claim 12, wherein the cytosine cytokine is the Granulocyte-Macrophage Colony Stimulating Factor.

Claims 14-20 (canceled).

Claim 21 (previously presented): A method of treating cancer in a patient in need of such treatment, said method administering to said patient an anticancer effective amount of a composition of claim 1.

Claim 22 (currently amended): The A method of claim 21, wherein the cancer is prostate, colon, lung, breast, ovary, head-neck, vulva, bladder and or brain cancer or glioma.

Claim 23 (previously presented): A method of treating viral or bacterial infections in a patient in need of such treatment, said method comprising administering to said patient an anti-infection effective amount of a composition of claim 1.

Claim 24 (previously presented): A method of treating an auto-immune disease in a patient in need of such treatment, said method comprising administering to said patient an anti auto immune disease effective amount of a composition of claim 1.

Claim 25 (new): A method of treating a non-transmissible chronic disease in a patient in need of such treatment, said method comprising administering to said patient an anti non-transmissible chronic disease effective amount of a composition of claim 1.

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Claim 26 (new): A method of treating AIDS in a patient in need of such treatment, said method comprising administering to said patient an anti-AIDS effective amount of a composition of claim 1.

Claim 27 (new): The method of claim 1, wherein the pharmaceutical composition further comprises one or more adjuvants.

Claim 28 (new): The pharmaceutical composition of claim 8, wherein the gangliosides are GM3 or its N-glycolated variations.